DOCUMENT RESUME

ED 333 422 CS 212 859

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TITLE "Building the Perfect Beast": Assessing the Effects of CMI (Computer-Managed Instruction) on the Teaching of, and Student Writing about, Literature.
PUB DATE 19 Apr 91
NOTE 10p.; Paper presented at the Annual Conference on Computers and English (4th, Old Westbury, NY, April 19, 1991).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Computer Managed Instruction; *Educational Assessment; Essays; *Literature Appreciation; Secondary Education; *Technological Advancement; *Writing Assignments; *Writing Instruction
IDENTIFIERS Text Factors

ABSTRACT

Measuring the effects of computer-managed instruction (CMI) on the teaching of and student writing about literature involves more than having students write and then evaluating their performance. Measurement is made difficult by the fact that the computer technology used in instruction is in a state of flux. Variation of computer technology, whether in the form of the operating system, platform, or instructional software, is profitable for its designers. The use of computers in literature instruction can mean: (1) greater creativity, because instruction is freed from the two-dimensional text; (2) more interconnectivity to the text, as a result of greater accessibility; (3) closer analysis of the text, as the mechanics of textual analysis are simpler; and (4) greater fluency in the manipulation of symbols. Many different types of assessment can be applied over a period of years. Teachers can use "process logs" to track student interaction with literature and the new technology. The "blind" reading of student essays can be replaced by a consensual assessment model, by which multiple scorers/readers assess a given essay simultaneously and anonymously. Among the dangers of CMI are that the technology will overshadow the writing and that the system will aggravate the inability of many students to concentrate. (SG)

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Richard Toby Widdicombe

"'Building the Perfect Beast': Assessing the Effects of CMI (Computer-Managed Instruction) on the Teaching of, and Student Writing about, Literature"

Introduction

The title of my presentation as it appears in the conference schedule ("Assessment Methods for Computers in the Teaching of Literature") is misleading and unforgivably dull. I deny all knowledge of its provenance. Instead, I suggest either "Designing a Better Mousetrap" or the title of a mid-1980's Don Henley song: "Building the Perfect Beast." The former suggests the seriousness of the enterprise as well as its possible futility. The latter describes perfectly student and faculty attitudes to assessment: a peculiar mixture of fear, loathing, and grudging respect for a Godzilla-like creature (assessment) running possibly rampant through all that has been held dear (teaching techniques of the past).

The Question

How are we to assess the impact of computers on student writing about literature, where computers are both a composing and a teaching tool?

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The Provisional Answer

The provisional answer from my perspective: simply do what I've been doing in assessment for the last seven years or so. Come up with a rating scale; have the students write something; and then evaluate their performance.

The Inadequacy of the Provisional Answer

Such a strategy sounds easy enough, perhaps; however, it won't work because the issue of how to assess the impact of computers on student writing about literature is full of *unknown variables*, *paradoxes*, and *problems*. It's only a slight exaggeration to say that--until we spend a significant amount of time thinking through the issue--we won't know what we're assessing, we won't know how to assess it, and we won't even know why we're assessing it.

Two Unknown Variables

1. Heteromedia/hypermedia/multimedia may (probably will) profoundly affect the way students perceive literature. So, whatever we're trying to assess will be in a state of flux because computer technology shows no sign of voluntarily accepting standardization; there's too much profit in variation.

2. The means of instruction--operating system (OS/2, DOS, System 7, or UNIX?), platform (GUI or character-based/command line, network or non-network, LAN or WAN?), and software (will IBM orphan or upgrade Linkway?)--are constantly changing. So, the pedagogy will be in a state of flux. One glance at the literature in the field is enough to convince anyone of this.

Four Paradoxes

1. Until the "massaging" of statistics stage is reached, most assessment of writing is done with pencil and paper. You can call the pencils "norming wands" and the scoring sheets "magic scrolls," but there's still a disturbing disjunction between the mechanics of assessment (low tech) and the object of assessment: the influence of computers (high tech).

2. Most instructors/teachers know significantly less about and are noticeably less comfortable with computers than their students are; conversely, students know significantly less about and are noticeably less comfortable with literature than their teachers are. We have, then, two pedagogical gaps rather than the usual one.

3. The ease of textual production is in inverse proportion to the seriousness of the writing error. One might assume

that the deftness with which mistakes can be corrected on the computer would mean that students would produce cleaner copy. On the contrary, the errors frequently aren't fixed, so that the written work comes to resemble a palimpsest of shifted or mixed constructions. An example from the *New York Times* (April 15, 1991) is informative here:

"The helicopter flew across a runway where a stunt plane had just taken taking off."

The writer had obviously begun here with one construction ("was just taking off"), replaced it with what he/she thought was an improvement ("had just taken off"), but forgot to remove all traces of the original version. An easy mistake on the computer; an extremely difficult error to commit when writing in longhand.

4. In assessing the effect and/or value of computers in the teaching of literature, one is using a hierarchical instrument (1-6 norm-referenced scale or a variation of it) to assess a fundamentally *democratizing*, *decentralizing*, *decanonizing* technology: the computer. *Democratitizing* because it allows significantly freer and more anonymous access to information and communication; *decentralizing* because the modem or LAN/WAN technology allows for distance between information and its receiver or producer;

decanonizing because the source of authority (the instructor, for example) can very easily remove himself/herself from the learning process of information exchange.

Four Problems

1. Literature as written texts is virtually unknown to students today. They simply don't read and won't read. I've obviously phrased this hyperbolically for rhetorical effect, but the crisis in the publishing industry today is caused in part by people simply reading less. Any instructor knows that every success story (the student who reads *War and Peace* and enjoys it) is accompanied by a bushel of failures (the student, for instance, who considers twenty pages of reading an imposition, or has little or no sense of the meaning of what he/she has just read because words have all the friendliness of abstruse mathematical calculations, perhaps less).

2. As assessors, we have to decide whether to be proscriptive, prescriptive, or descriptive.

3. As assessors of the new technology being used in a new way, we have to avoid our proceedings/findings being politicized. This is, after all, the Bush era, the era of a

President intent on using testing to prove--against the evidence--that he is the "Education President."

4. As users of the new technology, students in their ability to access it--their ability, in the crudest form, to use a keyboard or to afford their own home computer--will vary widely.

The Question Revisited

I return then to the question with which I began: How are we to assess the impact of computers on student writing about literature, where computers are both a composing and a teaching tool?

Revised Answer (in five parts)

1. We hypothesize beforehand about what the effects of CMI will be on the teaching of literature to students:

A. Greater creativity in approach (because--via heteromedia/hypermedia/multimedia--the text is freed from its two-dimensional appearance as symbols on the page).

B. More interconnectivity in response (because the various parts of the text are more accessible).

C. Greater willingness to "read" a text closely (because the mechanism of textual analysis if simpler than with printed texts).

D. Greater fluency in the manipulation of symbols combined with an increasing reluctance to use the written word.

2. We throw every major form of assessment at students in a longitudinal study of several years in duration and see what the results yield:

A. Holistic Assessment (1-6 scale) [*norm referenced*]

B. Analytic Scoring (isolating particular features) [*norm referenced*]

C. Primary Trait Analysis (focusing on text production for particular tasks) [*criterion based*]

D. Performative Assessment (focusing on text production for particular tasks and audiences) [*criterion based*]

3. We question the students (via surveys) about the precise effects of the new technology on their appreciation of literature.

4. We use "Process Logs" to track students' interaction with literature and the new technology.

5. We make sure that the technology of assessment matches the technology of text production. At its most radical, I'd suggest throwing out the old paradigm of "blind" reading preceded by extended norming sessions and replacing it with

an altogether different paradigm: the consensual, networking model.

The Consensual Assessment Model: Here essay scorers/readers assess the same essay simultaneously and, via synchronous anonymous communication, achieve a consensus on that essay's value. In this way, the community of readers and writers in which the instructor is marginally primus inter pares is matched by a community of assessors in which the bogus reconciliation represented by a third reading is replaced by genuine agreement achieved after a true meeting of minds.

Half-A-Dozen Words of Warning

The new technology will make literature more accessible to students by removing its sanctified status as a set of revered texts. However, we need to guard against several dangers and to assess their rate of occurrence in order to judge how seriously under threat written culture may be:

Danger #1: That the medium will get in the way of the message--the technology can and should be transparent.

Danger #2: That the insights about the human condition that constitute literature's only claim to privileged status will be lost in the process of their multimedia transformation.

Danger #3: That instructors, in their anxiety about apparently losing control of the learning process, will pay mere lip service to the idea of democratizing the classroom.

Danger #4: That instructors will forget that the goal of any language is clear communication--albeit, as in literature, clear communication of the ambiguous.

Danger #5: That instructors will forget that the value of the new technology is as a means to an end: to lead students back to the active reading of literary texts.

Danger #6: That the new technology will aggravate the greatest weakness students today display: a radical inability to concentrate.

Author's Note

I've begun taking the advice I've presented in this paper in a longitudinal study of CMI in the teaching of literature. The study is being conducted in collaboration with Locust Valley High School, and the results so far augur well for the integration of computers into the English curriculum.

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